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AMSAT NEWS SERVICE
ANS-363

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see:
http://www.amsat.org/mailman/listinfo/ans

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ANS-363 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 363.01
From AMSAT HQ KENSINGTON, MD.
DATE December 29, 2019
To All RADIO AMATEURS
BID: $ANS-363.01

First Element of ARISS Next Generation Radio System Readied for Launch on SpaceX CRS-20

During this Holiday Season, when the spirit of giving and receiving gifts reigns high, ARISS received a special gift and delivered a phenomenal gift to the international community. This occurred on Thursday December 19, 2019.

Our international gift to all—students, STEM education, the public and the amateur radio community—was the historic transfer of the first Interoperable Radio System (IORS) flight unit, serial number 1001, to NASA Johnson Space Center for launch on SpaceX CRS-20. The special gift received by ARISS was the approval from NASA Safety to launch the IORS on SpaceX CRS-20 and stow the radio system on the International Space Station. December 19, 2019 was truly a banner day for ARISS!

The IORS is a foundational element of the ARISS next generation radio

system and is an incredible engineering achievement by the ARISS hardware team. This first element delivery will support easier radio mode transitions and enable new, exciting capabilities for hams, students and the general public. The IORS will include a higher power radio, an enhanced voice repeater, updated digital packet radio (APRS) capabilities and slow scan television (SSTV) capabilities for both the US and Russian segments. The IORS consists of a special, modified JVCKenwood TM-D710GA transceiver, an AMSAT-developed multi voltage power supply and interconnecting cables.

This first flight IORS will be installed in the ISS Columbus module. A second flight unit is expected to be launched sometime in 2020 for installation in the Russian Service module. A total of 4 flight units and 10 total units will be built by the ARISS hardware team to support on-board flight operations, training, operations planning and hardware testing. Future upgrades and enhancements to the next generation system are in various stages of design & development. These include a repaired Ham Video system (currently planned for launch in mid-to-late 2020), L-band (uplink) repeater, ground command operations capability, LimeSDR signal reception, a microwave “Ham Communicator” and Lunar Gateway prototype experiment.

While yesterday was truly an historic milestone, it should be noted that there is still much “heavy lifting” work to be done to prepare the IORS for Operations on ISS. ARISS has 92 engineering requirements and our operations Phase III safety review to complete. The space agencies take a position of “Trust but Verify.” Thus, these engineering and safety “verifications” all need to be closed out before the IORS can be unstowed and turned on. This will be the ARISS hardware team’s focus over the next few months.

Also, please remember that ARISS is almost entirely run by volunteers. So donations to the ARISS program for next generation hardware developments, operations, education and administrative functions are always welcome. Please go to https://www.ariss.org/donate.html if you want to contribute to our efforts!

In closing, ARISS would like to thank the outstanding contributions of the IORS hardware development team on an incredible radio system. ARISS would like to thank our sponsors and donors for helping us realize the IORS hardware systems. On behalf of the ARISS team, we would like to wish you all a joyful and prosperous Holiday Season – Merry Christmas, Happy Hanukkah, and Happy New Year!!

Ad Astra! To the Stars!

73,
Frank Bauer, KA3HDO
ARISS International Chair
AMSAT V.P. for Human Spaceflight Programs

[ANS thanks Frank Bauer, KA3HDO, AMSAT Vice President - Human Spaceflight and ARISS International Chair for the above information]

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ARISS is planning an SSTV event featuring commemorative images. This event is currently scheduled to begin on December 28, 2019 at 11:00 UTC and ends at 18:20 UTC on January 1, 2020. Please make note that sometimes changes may occur in the crew work schedule that could affect our SSTV transmission dates and times, so frequently check our ARISS Facebook and Twitter accounts shown below for any updates before and throughout the event.

Transmissions will be sent at 145.800 MHz FM in the SSTV mode PD-120. Once received, images can be posted and viewed by the public at http://www.spaceflightsoftware.com/ARISS_SSTV/index.php and you can receive a special SSTV ARISS Award for posting your image. See https://ariss.pzk.org.pl/sstv/ for details. Also for simplicity, we have added a new information tab for SSTV events, under the General Contacts pulldown menu at www.ariss.org .

[ANS thanks Dave Jordan, AA4KN, ARISS Public Relations for the above information]

Reminder: AMSAT CW Day on January 1

You are cordially invited to take part in AMSAT CW Activity Day 2020 sponsored by AMSAT for all radio amateurs throughout the world. The 2020 event will be held in memory of Larry Brown, W7LB, and Keith Pugh, W5IU. Among their many contributions to AMSAT, they were the AMSAT 20-meter net for many years.

Participation is easy. Just operate CW through any Amateur Radio satellite on 1 January 2020. Use of straight keys or bugs is encouraged but not required. If you use AO-7, please observe the QRP rules currently in effect for that 45-year-old satellite. May it be with us for many years to come!

[ANS thanks Raphael Soifer, W2RS, AMSAT Senior Advisor for the above information.]

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FloripaSat 1 - NORAD CAT ID 44830 (Taiyuan Space Center launch, 12/20/2019).

(Thanks to Nico Janseen, PA0DLO, for satellite identification.)

CAS-6 was launched as a piggyback satellite on TIANQIN-1 on December 20, 2019 via a CZ-4B launch vehicle from Taiyuan Satellite Launch Center. Still awaiting a satellite signal, thus the CAT ID has not been positively identified as yet. More later.

[ANS thanks Ray Hoad, WA5QGD, AMSAT Orbital Elements Manager for the above information]

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Labrador (GO11 +) January 19-27, 2019
Chris VE3FU, Dave VE9CB, and Frank VO1HP will be active as VO2AC in the 2020 CQ160 CW contest, January 24-26, from Point Armour Lighthouse, in Labrador. If time permits before the contest, they may be active on FM satellites from GO11 as VO2AC or VO2AAA.

Depending on weather and timing of passes, you might catch them on FM satellites as they make their way from FO93 to GO-11, passing through FO92, GO02, GO13, GO12, and GO22 along the way, but no promises. They will also make the reverse trek on January 27.

Big Bend National Park (DL88) March 16-17, 2020
Ron AD0DX, Doug N6UA, and Josh W3ARD will operate from Big Bend National Park to put grid DL88 on the air. Details will be added here as they come available, but you are more than welcome to keep an eye on their individual Twitter feeds: https://twitter.com/ad0dx, https://twitter.com/dtabor, and https://twitter.com/W3ARDstroke5

Please submit any additions or corrections to ke4al (at) amsat.org

[ANS thanks Robert Bankston, KE4AL, AMSAT VP - User Services, for the above information]

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and/or LF skeds, E-mail Ash at: ash.kf5eyy at gmail.com
Your financial support will be used to cover youngsters' costs.

VO2, CANADA (Zone 2). Operators Chris/VE3FU (VO2AC), Frank/VO1HP and Dave/VE9CB (VO2AAA) will be active as VO2AC during the 2020 CQWW 160M CW Contest (January 24-26th) from the Point Amour Lighthouse, the tallest lighthouse in Atlantic Canada, on the south coast of the rare Labrador (LB) multiplier. Point Amour is located in the southeast part of CQ Zone 2, and has a salt water path from NE clockwise through SW. The team will be putting in a serious Multi-Op/High-Power effort as VO2AC. Expect some pre contest activity as VO2AC, VO1HP/VO2 and VO2AAA on 160m as they get their wire vertical array and beverage working; they will especially be looking for JA/Asia on CW and FT8. If time permits, they may also be active before the contest on 80m, 60m, 40m and the FM satellites (AO-85, AO-91 and AO-92) from Grid GO11.

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73 and remember to help Keep Amateur Radio In Space,

This week's ANS Editor,

Paul Stoetzer, N8HM
n8hm at amsat dot org